

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-016245**Date Inspected:** 16-Aug-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 1000**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1830**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site

CWI Name:	William Sherwood and Jim Cunningham			CWI Present:	Yes	No	
Inspected CWI report:	Yes	No	N/A	Rod Oven in Use:	Yes	No	N/A
Electrode to specification:	Yes	No	N/A	Weld Procedures Followed:	Yes	No	N/A
Qualified Welders:	Yes	No	N/A	Verified Joint Fit-up:	Yes	No	N/A
Approved Drawings:	Yes	No	N/A	Approved WPS:	Yes	No	N/A
				Delayed / Cancelled:	Yes	No	N/A
Bridge No:	34-0006			Component:	Orthotropic Box Girder		

Summary of Items Observed:

Caltrans Office of Structural Material (OSM) Quality Assurance Inspector (QAI) Joselito Lizardo was present at the Self Anchored Suspension (SAS) job site as requested to perform observations on the welding of components for the San Francisco Oakland Bay Bridge (SFOBB) Project.

At OBG 5W/6W side plate 'C' (3200mm to 7517mm) inside, QA randomly observed ABF/JV qualified welder Sungtao, Huang ID # 3794 continuing to perform CJP groove (splice) welding fill pass to cover pass on the splice butt joint. The welder was observed performing automatic welding in the 3G (vertical) position utilizing a dual shield Flux Cored Arc Welding (FCAW-G) with E71T-1M, 1/16" diameter wire electrode and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-3042B-1. The joint being welded had a single V-groove butt joint with backing bar. The splice joint was preheated and maintained to greater than 150 degrees Fahrenheit using Miller Proheat 35 Induction Heating System located at the opposite side of the plate prior/during welding. ABF Quality Control (QC) William Sherwood was noted monitoring the welding parameters of the welder. At the end of the shift, cover pass welding was completed and the welder started moving to higher elevation (1000mm to 3200mm location).

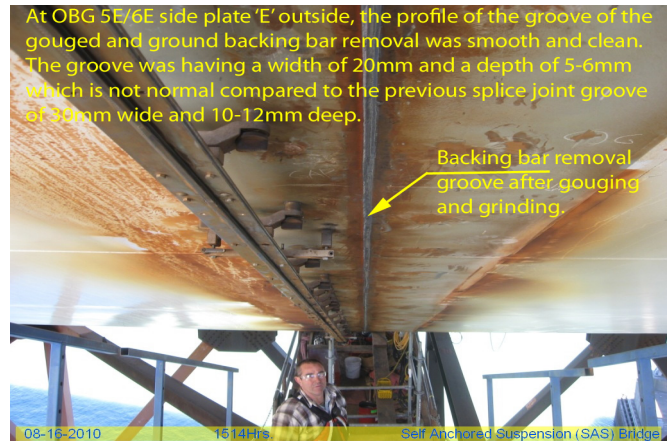
At OBG 2W/3W bottom plate 'D1' inside, QA randomly observed ABF/JV qualified welder Fred Kaddu perform CJP groove welding repair. The welder was observed welding in the 1G (flat) position utilizing Shielded metal Arc Welding (SMAW) with 1/8" diameter E7018H4R electrode implementing welding procedure ABF-WPS-D15-1000-Repairs. The weld repair was excavated to a boat shape and was having a dimension of 110mm long x 15mm wide x 8mm deep. The repair excavation was preheated to more than 140 degree Fahrenheit using propane gas torch prior welding. During the shift, ABF QC William Sherwood was noted monitoring the

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welder. Prior welding, ABF QC William Sherwood was also observed performing Magnetic Particle Testing (MT) on the repair excavation. During the shift, the welder has completed one welding repair inside and has moved to another location afterwards.

At OBG 5E/6E side plate 'E' outside, QA noted ABF personnel Mike Maday and Bryce Howell completed grinding the groove of the gouged backing bar removal. The splice joint was turned over to welder Rory Hogan and he was noted moving his welding machine and accessories to the area. Rory was also noted grinding the groove of the backing bar removal and when QA asked why the need for the additional grinding he said he wants the width of the groove to be more uniform. The dimension of the groove was having a width of 20mm and a depth of 5-6mm which according to welder Rory was unusual because previously they used to gouge the backing bar removal to around 30mm wide and 10-12mm deep. According to Rory this new gouging profile was an instruction coming from the superintendent. The welder continued grinding until the end of the shift and according to the welder the joint should be ready for QC Visual Test (VT) and Magnetic Particle Testing (MT) by tomorrow.



Summary of Conversations:

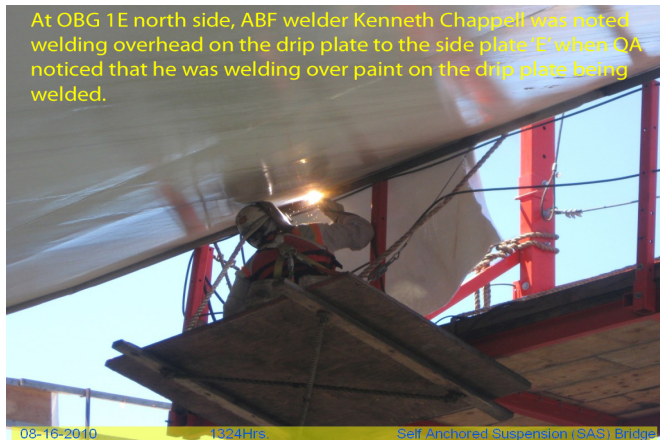
At the side plate 'E' of OBG 1E outside, ABF welder Kenneth Chappell was observed welding the 2 1/4" wide x 3/8" thick drip plate to the side plate 'E'. The welder was noted welding in the overhead position and was using 1/8" diameter, E7018H4R electrode. Prior to the observation of the welder, QA talked to the ABF QC Jim Cunningham and informed QA that the welding being done has no welding detail at hand but was told by the superintendent that the joint will be a Partial Joint Penetration (PJP) due to the natural configuration of the joint being welded. While QA was at the platform, the welder continued welding overhead using 1/8" diameter E7018H4R electrode. During the observation, it was noticed that the drip plate being welded to the side plate was painted and the paint was not ground before tack welding to the side plate and also during welding.

QA went up to the top deck and there QA met Jim Cunningham and Mike Johnson. Since Jim Cunningham was the designated QC for the job this QA informed him of what QA observed underneath the side plate. As soon as I told Jim Cunningham about the drip plate being welded without removing the paint, he started shouting and telling QA that he was there when the welder ground off the paint. But QA told QC that QA just went there and saw the condition of the plate being welded. QC Jim Cunningham also claimed that QA was accusing him of being a liar. QA responded that QA was not accusing him of being a liar but just telling what QA saw while the welder was welding. QA tried to calm QC down but to no avail.

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At OBG 1E north side, ABF welder Kenneth Chappell was noted welding overhead on the drip plate to the side plate 'E' when QA noticed that he was welding over paint on the drip plate being welded.



Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact SMR Mohammad Fatemi (916) 227-5298, who represents the Office of Structural Materials for your project.

Inspected By:	Lizardo, Joselito
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Quality Assurance Inspector

Reviewed By:	Levell, Bill
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QA Reviewer
